Ecological benefits of gardening wildflowers

May 26 2014, by Niki Lawrence

Natural beauty.

Are you feeling inspired from watching the Chelsea Flower Show? Do you long for an immaculate, well-designed garden, full of well-behaved plants, brimming with colourful flowers and attractive foliage? The problem is that the gardens and flowers on show at Chelsea require a great deal of maintenance, a regular application of fertilisers and liberal use of herbicides and pesticides to keep hungry bugs and weeds at bay.

But there is an alternative option. If you want a low-maintenance, natural

ecosystem, then look no further for cultivating a garden that's good for you and your family.

Back to the wild

Growing a wild flower meadow in your garden is one option for keeping things really natural and low maintenance, but still very beautiful. Planting perennial wild flowers will bring year-on-year returns. Beware though, they prefer to grow on poorer soils just because this reduces grass growth, which otherwise tends to out-compete the flowers. You can of course reduce your soil nutrition by removing the top soil first before planting, but another option is to grow wildflower annuals which can be planted into richer soil.

It is best to avoid collecting seeds from plants growing in the wild as this can seriously deplete the natural seed bank. Since the 1930s the prevalence of wild flower meadows has diminished alarmingly down to only 2% of their former levels. Instead it is recommended that you find a good wild flower seed supplier who can advise you on the best seed mix for the conditions in your area. Native species will better self-seed and support the regeneration of wild flowers.

Companion planting

Sometimes we don't get along with our neighbours and long to move to an environment where we can happily abide in peace. Well there's evidence to show that some plants may feel the same, as there are species that send out toxic chemicals which inhibit the development of surrounding plants, a process called allelopathy.

Wild chamomile and teasel. Credit: Niki Lawrence

Black walnut trees, for example, do this by producing their own chemical herbicide, juglone. It is excreted from the tree's roots into the surrounding soil, which can then cause wilting and yellowing of nearby plant leaves and may even eventually kill its neighbours. Certain species such as cabbages, tomatoes, potatoes and apple and yew trees are particularly sensitive to juglone, which means you should avoid planting them near black walnut trees.

But some plant species seem to actually encourage the growth of other plants. Pea family plants, for example, improve the soil around them through the rhizobium bacteria they have in their roots. This bacteria converts atmospheric nitrogen into an absorbable form, benefiting the growth of surrounding plants.

Some plants can also be beneficial to neighbouring plants by repelling harmful insects. For example, when you plant onions with carrots, this inhibits carrot flies; or plant french beans with cabbages, the beans deter aphids. Cultivating these plants is known as companion planting and if you want your garden to flourish, neighbourly plants are the ones you want to go for.

Scientists have also been exploring signals given off by plants, with research demonstrating that certain species, when attacked by pests, produce odours to repel them or attract other insects that naturally deter their pests. The cabbage family of plants frequently produce a pungent mustard-smelling chemical called isothiocyanate, which repels certain types of aphid.

Some plants also release an aromatic chemical called myrtenal that has a similar insect-repelling function. Myrtenal smells a bit like pine trees, but is found in aromatic plants such as thyme, mint, rosemary and sage. By growing these herbs in your garden, besides providing you with excellent ingredients for the kitchen, you'll have natural pest inhibitors.

Buzz pollination

Wildflowers are also useful for their role as pollinator plants as they help to support declining bee populations. Many cultivated plant varieties have defective pollen and nectar producing organs and may have multiple petals that block pollinator entry, which is bad for the ecosystem.

Don't think of bees as pests in your garden, rather sit back and watch these pollinators at work. You'll observe some fascinating behaviour in the way they stimulate the pollen chambers of difference flowers to enhance pollen release – a process called buzz pollination or sonication.

It is a process young bees and bumblebees have to learn, as they need to clasp the pollen organs and then rapidly move their wing muscles to produce a vibration that is significantly higher and louder in frequency than that used for flight. When the right vibration is created this stimulates the release of pollen. Certain flowering species are particular geared for buzz pollination, such as potato and tomato flowers.

Cultivating a natural garden is not only good for the environment, but a relaxed and low-maintenance way of gardening. Plus, as it grows and develops day-by-day, you will have more time to sit and enjoy watching and learning from the fascinating workings of nature around you.

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